

Re: 2.058833711777943011170351... = ? continued fraction convergents//

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- *From:* "Robert Israel" <israel@xxxxxxxxxxxxx>
 - *Date:* 30 Dec 2006 20:18:31 -0800
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Proginoskes wrote:

don.lotto@xxxxxxxxxxxxxxxxxxxxx wrote:

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N. Silver wrote:

Proginoskes wrote:

$$2 + (1 / (17 - (1 / (340 - (1 / (8.5 + (1 / 51))))))) = 2.05883371$$

fermat gauss numbers on casio fx 82 schools calc.
from memory. signs may be wrong.

Exact value: 2.058833712. No good.

regular n-gon.
multiples 2 3 5 17
 $= 2^{(2^n)} + 1.$

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I tried that, but I guess I didn't mention it. The continued fraction starts out as
[2, 16, 1, 338, 1, 7, 2, 1964179, 1, 1, 8, 169, 1, 3, 1, 6, 22000684073033, ...]

That's a humungous element for your continued fraction. The part you quoted only gave [2, 16, 1, 338, 1, 7, 2, 1964179, 1, 1, 4]. Is the number defined in terms of

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its continued fraction? Or did you really do your calculations to 60 digits or so?

The difference between $[2, 16, 1, 338, 1, 7, 2, 1964179, 1, 1, 8, 169, 1, 3, 1, 6, 22000684073033]$ and $[[2, 16, 1, 338, 1, 7, 2, 1964179, 1, 1, 8, 169, 1, 3, 1, 6, 22000684073032]$ is less than $5.8 * 10^{(-60)}$.

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